KOSTECKI, J.

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Przegl geol 11 no.10:3 of cover. O'63.

KOSTECKI, J.

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KOSTECKI, Jan

Methods of testing the heterosis in the strain of sugar beets.
Postepy nauk roln 6 no.6:97-106 N-D '59. (EEAI 9:7)
(Heterosis) (Sugar beets)

KOSTECKI, Jan

Twelve years of the breeding of the Malgorzatka Udycka winter wheat. Postepy nauk roln 7 no.1:65-78 Ja/F '60. (EEAI 9:10)
(Poland--Wheat)

KOSTECKI, Jan

Adaptation of winter wheat varieties to the real requirements of agriculture. Postepy nauk roln 9 no.4:11-16 Jl-Ag '62.

KOSTECKI, Jan

Works on wheat breeding in Italy and its cultivation conditions.
Postepy nauk roln 11 no.3:145-152 My-Je '64.

[illegible], M.

"Ultrasonic methods in determining the thickness of shell plating."
Technika I Gospodarka Morska, Gdansk, Vol 4, No 5, May 1954, p. 135

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

KOSTECKI, Ryszard

Quantitative studies on the morphologic elements in the hemolymph of bees. Rocz nauk roln vet 70 no.1/4:80-81 '60.
(EEAI 10:9)

1. Instytut Weterynarii, Swarzedz.

(Bees) (Hemolymph)

KOSTECKI, Stanislaw

Isotopic defectoscopes for the testing of petroleum pipelines.
Przegl elektrotechn 38 no.5:218, '62.

1. Zaklady Radiologii Przemyslowej, Warszawa.

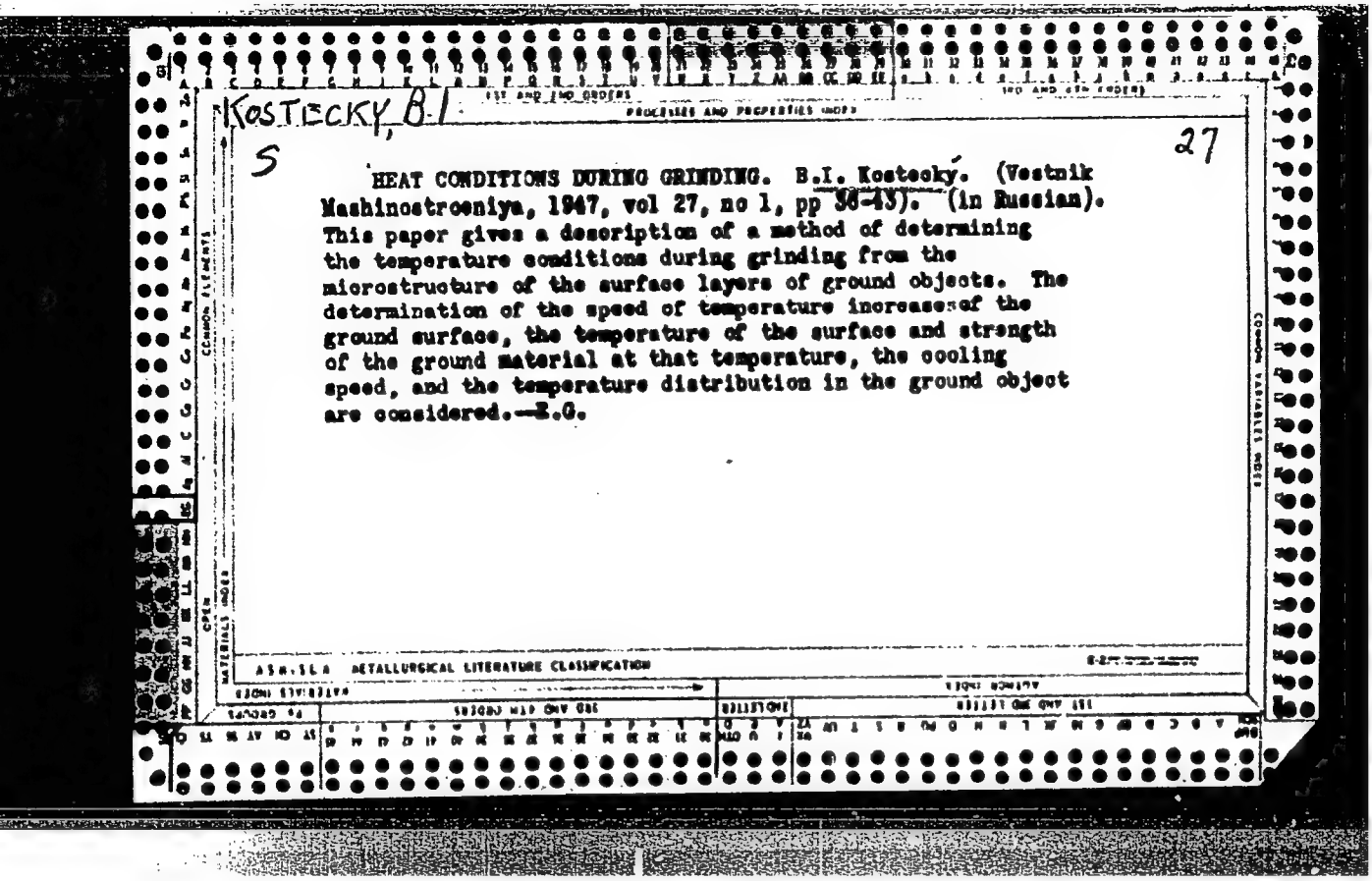
KOSTECKI, Tadeusz, mgr., inz.; KAWALEC, Tadeusz

Advantages for inland navigation resulting from the changed system of feeding the flow of the central part of the Oder River from reservoirs. Gosp wodna 21 no.12:524-527 D '61.

KOSTECKOVA, A.

HOREJSI, J.; KOSTECKOVA, A.; KULISOVA, D.; PIHERT, J.; TRNKA, F.

Report from the infectious hepatitis ward of the Masaryk Hospital in Krca. Cas. lek. cesk. 90 no.31:928-933 3 Aug 1951. (CLML 21:1)



KOSTECKY, B.I.

S

27

HEAT CONDITIONS DURING GRINDING. B.I. Kostecký. (Vestnik Mashinostroeniya, 1947, vol 27, no 1, pp 38-43). (in Russian). This paper gives a description of a method of determining the temperature conditions during grinding from the microstructure of the surface layers of ground objects. The determination of the speed of temperature increase of the ground surface, the temperature of the surface and strength of the ground material at that temperature, the cooling speed, and the temperature distribution in the ground object are considered.—E.G.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KOSTEK, Miroslav

Transformer parallel operation control in communities by means of a contactor. Energetika Cz 13 no.1:24 Ja '63.

1. Zapadoslovenske energeticke zavody, Trnava.

KOSTEK, T.

Attempt of Marxist interpretation of certain problems in orthopedics. Polski tygod. lek. 6 no.12:395-402 19 Mar 1951. (CLML 20:11)

1. Of the Third Surgical Clinic (Head -- Prof. A. Gruca, M.D.) of Warsaw Medical Academy.

KOSTEK, T.

Application of Filatov's flap in injuries of the motor organs. Polski przegl. chir. 24 no.6:843-854 Nov-Dec 1952. (CLML 24:2)

1. Of the Third Surgical Clinic (Orthopedic) (Head--Prof. A. Gruca, M.D.) of Warsaw Medical Academy.

KOSTEK, T.

Vitality of tissues preserved in low temperatures. K. Ostrowski and T. Kostek (*Bull. Acad. polon. Sci.*, II, 1953, 1, 11—14).—In cartilage preserved at — 30° and — 79°, 1—4% and 4—10% of the cells remain alive. Defrosting was done at room temp. or 37° but in conditions of slow defrosting the preserved cartilage dies. Neutral red is used for vital staining. The vitality of a cartilage left in a joint 48 hr. after the death of the animal is equal to that of a cartilage left in Ringers fluid for the same length of time.

E. C. BUTTERWORTH.

KOSTEK, T.

OSTROWSKI, K.; KOSTEK, T.

Studies on vitality of tissue preserved in low temperatures; studies on vital staining of cartilage preserved in low temperature. Fol. morph., Warsz. 4 no.2:101-115 1953. (CDML 25:1)

1. Of the Institute of Histology and Embryology (Head--Prof. J. Zweibaum, M.D.) and of the Third Surgical (Orthopedic) Clinic (Head--Prof. A. Gruca, M.D.), Warsaw Medical Academy.

KOSTEK, T.

Present state of bone transplantation and role of refrigerated bone in orthopedics. Chir. narz. ruchu ortop. polska 18 no.2:113-132 1953. (CIML 25:1)

1. Of the Third Surgical Clinic (Orthopedics) (Head--Prof. A. Gruca, M.D.) of Warsaw Medical Academy.

KOSTEK, T.

Observations on role in orthopedics of homogenous and heterogenous bone grafts preserved in low temperatures. Chir. narz. ruchu ortop. polska 18 no.2:123-131 1953. (CLML 25:1)

1. Of the Third Surgical Clinic (Orthopedics) (Head--Prof. A. Gruca, M.D.) of Warsaw Medical Academy.

KOSTEK, Tadeusz.

Possibilities of application of frozen calf cartilage in facial plastic surgery. Otolar. polska 8 no.3:219-228 1954.

1. Z III Kliniki Chirurgicznej Akademii Medycznej w Warszawie. Kierownik: prof. dr A.Oruca.

(FACE, surgery,
plastic, implant of frozen calf cartilage)
(CARTILAGE, transplantation,
in face plastic surg., implant of frozen calf cartilage)
(TRANSPLANTATION,
cartilage, facial plastic surg. with frozen calf cartilage)

OSTROWSKI, Kazimierz; KOSTEK, Tadeusz

Morphogenesis of articular cartilage cultured in the anterior chamber of the eye. Fol.morph.,Warsz. 6 no.3:217-224 '55.

1. Zaklad Histologii i Embriologii A.M.w Warszawie, Kierownik: prof. dr. J. Zweibaum.

(CARTILAGE, embryology,
transpl. of articular cartilage into anterior chamber of eye in rats)
(TRANSPLANTATION,
cartilage, embryonic articular, into anterior chamber of eye in rats)
(EYE, physiology,
implant of embryonic articular cartilage into anterior chamber in rats)

KOSTEKEL, O., doktor [Costachel, O.]; DREGENESKU, F.I. [Draganescu, I.]; MOGOSH, I., doktor [Mogos,I.]; DEMETRIU, Fl.

Intra-arterial administration of large doses of cytostatics under the protection of bone marrow trasplantation in advanced cases of cancer. Vop.onk. 9 no.2:53-60'63. (MIRA 16:9)
(MARROW--TRANSPLANTATION) (CANCER)
(CYTOTOXIC DRUGS)

KOSTEL, S.; KROFTA, V.

Main trends in schemes for the adaptation and enlargement of agricultural machinery plants in Czechoslovakia. p. 1. (ZEMEDELSKE STROJE, Vol. 2, No. 1, Jan 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

YUGOSLAVIA/Chemical Technology - Chemical Products and Their Application. Photographic Materials. H-20

Abs Jour : Ref Zhur - Khimiya, No 17, 1958, 58584

Author : Kostelac Rajka
Inst :
Title : Photographic Gelatin.

Orig Pub : Kemija u industriji, 1957, 6, No 12, F-50-F-51

Abstract : No abstract.

Card 1/1

KOSTELECKA-MYRCHA, Alina; MYRCHA, Andrzej

The rate of passage of foodstuffs through the alimentary tracts of certain Microtidae under laboratory conditions. Acta theriol. 9 no.1/8:37-53 '64.

Choice of indicator in the investigation of the passage of foodstuffs throught the alimentary tract of rodents. Acta theriolog 9 no.1/8:55-65 '64.

KOSTELECKY, Antonin; STOLZ, Josef

Urachal cyst simulating cancer of the bladder. Rozhl.chir. 34 no.1-2: 81-87 Feb '55.

1. Z chir. kliniky lek. hyg. fak. Praha XII, predn. prof. Dr E.Polak. Z prosektury st. obl. nem. Praha XII, predn. prim. Dr Josef Stolz

(URACHUS, cysts
differ. diag. from cancer of bladder)
(BLADDER, neoplasms
differ. diag. from urachal cyst)
(CYSTS
urachus, differ. diag. from cancer of bladder)

KOSTELECKY, A.

CIZKOVA-PISAROVICOVA, J.; KOSTELECKY, A.

Thyreddectomy in children & adolescents. Cas. lek. cesk. 96 no.33-34: 1032-1037 23 Aug 57.

1. Chirurgicka klinika, prednosta prof. MUDr M. Polak a detska klinika LFHKU, SFN Praha XII, prednosta prof. MUDr J. Cizkova-Pisarovicova. J. C.-P., Praha 12, Srobarova 48.

(THYROID GLAND, surg.
in child. & adolescents (statist. comparison (Cz))
(ADOLESCENCE,
thyroidectomy in adolescents & child. statist. comparison (Cz))

KOSTELECKY, Antonin

Surgery of tracheobronchial tract. Cas. lek. cesk. 96 no.42:132-135 18 Oct 57.

1. Chirurgicka klinika HLFKU, prednosta prof. E. Polak. A. K. Praha XII., Srobarova 50.

(RESPIRATORY TRACT, surg.
tracheobronchial review (Cz))

KOSTELECKY, Antonin (Praha 10, Nad vodovodem 3)

Prospects in the treatment of cancer of the tracheobronchial tree. Neoplasma, Bratisl. 5 no.3:308-311 1958.

1. Surgical Clinic of the Hygienic Medical Clinic, Prague 12.
(TRACHEA, neoplasms
surg., palliative & radical methods in cancer of tracheobronchial tree)
(BRONCHI, neoplasms
same)

KOSTELECKY, Ant. (A. K., Praha 10, Nad vodovodem 43)

Intrapancreatic cystoids treated by internal drainage. Rozhl. chir. 37 no.3:162-167 Mar 58.

1. Chir. klinika HLF KU v Praze XII, prednosta prof. Dr. E. Polak.
(PANCREAS, cysts
internal drainage of intrapancreatic cystoids (Cz))

POLAK, E.; KOSTELECKY, A.

Remote results of internal drainage of pancreativ pseudocysts. Cas. lek. cesk. 97 no.14:435-439 4 Apr 58.

1. Chirurgicka klinika lekarske fakulty hugienicke v Praze 12, prednosta prof. Dr. E. Polak. E. P., Praha 12, Washingtonova 17.

(PANCREAS, cysts,
pseudocysts, remote results of internal drainage (Cz))

KOSTELECKY, Antonin

Strangulated diaphragmatic hernia. Rozhl.chir.40 no.2-3:138-140 Mr '61.

1. Chirurgicka klinika lekarske fakulty hygienicke v Praze 10.
(HERNIA DIAPHRAGMATIC compl)

KOSTELECKY, Antonin

Results of the modified Heller extramucous myotomy. Roshl. chir. 40 no.5:304-309 '61.

1. Chirurgicka klinika lekarske fakulty hygienicke, Praha 10, prednosta prof. dr. E. Polak.

(CARDIOSPASM surg)

PETRIKOVA, J.; KOSTELECKY, A.

Solitary coin lesions of the lung. Cas.lek.cesk 100 no.24/25: 779-785 23 My '61.

1. Chirurgicka klinika LFH KU v Praze, prednosta prof. dr. E. Polak.

(LUNGS radiog)

KOSTELECKY, A.; NAHODIL, Vl.

Coincidence of severe hemorrhage from duodenal ulcer with simultaneous gastric carcinoma. Cesk. gastroent. 16 no.2:147-149 Mr '62.

1. Chirurgicka klinika LFU KU, Praha 10, predn. prof. MUDr. E. Polak.
(STOMACH NEOPLASMS) (DUODENAL ULCER)
(PEPTIC ULCER HEMORRHAGE)

Czech references. (Manuscript received Feb 62).

1/1

GERT, R., ins., C.Sc.; KOSTELECKY, L., inz.

Operational characteristics of the VMC 10 kV circuit breaker as determined in the field laboratory of the Power Research Institute in Sokolnice. Bul EGU no.5/6:22-31 '62.

KOSTELECKY, Premysl

Building projects of the limestone quarries in Stramberk and Vcelary. Rudy 11 no.10:335-338 O '63.

1. Rudny projekt, Brno.

KOSTELECKY, S., dr.

"Wage and its importance under socialism" by V.Gerloch. Reviewed by S.Kostelecky. Podnik organizace 16 no.11:528 N '62.

KOSTELECKY, Svatopluk, dr. inz

Experiences in labor productivity measurement in heavy engineering. Podn org 18 no.4:163-166 Ap '64.

1. Research Institute of Machine Industry Technology and Organization.

KOSTELECKY, Z.

Technical progress and normalization, typification and standardization.

p. 17 (Vynalezy a Normalisace, Ochranne Znamky, Chranene Vzory. Vol. 1, no. 3, Sept. 1957. Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

KOSTELECKY, Z.

"Are trade-marks unnecessary in socialism?" p. 13.

VYNALEZY A NORMALISACE, OCHRANNE ZNAMKY, CHRANENE VZORY. (Urad pro vynalezy a normalisac). Praha, Czechoslovakia, Vol. 3, No. 4, Apr. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

KOSTELETSKI, Sv., d-r

The personal material incentives for the machine construction workers in Czechoslovakia. Mashinostroenie 11 no.11:45-[illegible]62.

DUHON, J., MUDr.; KOSTELKA, S.

Olecranon resection in children's tuberculosis of the elbow. Acta chir. orthop. traum. Cech. 32 no.2:128-132 Ap'65

1. Chirurgicke oddelenie Detskej liecebne tuberkulozy v Dolnom Smokovci (veduci: MUDr. J. Duhon).

DUHON, J., Dr.; ZBINOVSKY, D., Dr.; MALINIAK, J., Dr.; KOSTELKA, St. MUC

Successes and failures of therapy of osteoarticular tuberculosis with PAS and streptomycin in children. Acta chir. orthop. traum. cech. 21 no.5-6:150-155 Dec 54.

1. Z chir. odd. Detskej liecebne tbc. v Dolnom Smokovci, prednosta Dr. Duhon

(TUBERCULOSIS, OSTEOARTICULAR, in infant and child
ther. PAS & streptomycin, results)
(PARA-AMINOSALICYLIC ACID, ther. use
tuberc., osteoarticular in inf. & child.)
(STREPTOMYCIN, ther. use
tuberc. osteoarticular in inf. & child.)

Catalysis

Space velocity in heterogeneous catalysis. Zhur. prikl. khim. 25 no. 2 (1952)

9. Monthly List of Russian Accessions, Library of Congress, August 1953. Unclassified.

KOSTELKOVA, LIBUSE

Stavitelstvi. [Vyd. 1.] Praha, Statni pedagogicke nakl., 1952. 195 p. (Ucebni texty vysokych skol) [Building construction. Bibl., separate diagrs.]

SO: MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, LC., VOL. 3, No. 1, Jan. 1954, Uncl.

KOSTELKOVA, LIBRUSE

Prumyslove stavby. I. [Vyd. 1.] Praha, Statni pedagogicke nakl., 1953.
(Ucebni texty vysokych skol) [Industrial buildings. Bibl., diagrs.]

SO: Monthly List of East European Accessions, Library of Congress, February, 1954, Vol. 3, No. 2, Uncl.

KOSTELNAK, Miroslav

Complex analyses of work organization in metallurgical works. Prace mzda 12 no.5:213-219 My '64.

1. Vitkovicke zelezarny Klementa Gottwalda National Enterprise, Ostrava.

KOSTELNAK, Miroslav

Organizational incorporation of standardization workers into metallurgic enterprises. Prace mzda 12 no.1:12-14 Ja '64.

1. Vitkovicke zelezarny Klementa Gottwalda, Ostrava.

KOSTELNAK, Miroslav; KORPAS, Miloslav

Use of recording the moment of work in the metallurgical industry. Prace mzda 12 no.9:393-398 S '64.

1. Vitkovicke zelezarny Klementa Gottwalda National Enterprise, Ostrava.

L 44762-65 EPR/EWP(k)/EWP(h)/T/EWP(l)/EWP(v) Pf-4
ACCESSION NR: AP5015037 CZ/0057/64/000/010/0479/0481

AUTHOR: Kostelnak, Miroslav

TITLE: Standardization helps to improve labor productivity in new production units

SOURCE: Hutnik, no. 10, 1964, 479-481

TOPIC TAGS: industrial management, metallurgic industry

Abstract: An analysis is presented of the organization of work at three sites of the new automated blast furnace of theVZKG. The working time necessary to perform individual types of work is given in tables for the hopper pit, furnace platform, and point of transfer of the conveyer belts.

Orig. art. has 4 tables.

ASSOCIATION: VZKG, Ostrava

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, GO

NO REF SOV: 000 OTHER: 000 JPRS

Card 1/1

MACH, J.; KROULIK, J.; KOSTELNIK, J.; NADVORNIK, P.

Pulmonary candidiasis. Vnitrni lek. 11 no.10:1004-1008 O '65.

1. Vnitrni oddeleni nemocnice Cervena Voda, Obvodniho ustavu narodniho zdravi Usti n. Orl. (prednosta dr. Jan Mach), Plicni lecebna Zamberk (reditel dr. Frantisek Mydlil), Patologicko anatomicke oddeleni nemocnice Litomysl (prednosta dr. Josef Kostelnik) a Mikrobiologicke oddeleni Okresni hygienicko-epidemiologicke stanice Litomysl (prednosta prom. lek. Pavel Nadvornik).

POLORNY, M., inz.; SACHL, V., inz.; KOSTELNIK, J.

Use of wider trellises in growing hops. Vestnik CSAZV 7 no.8:402-404 '60. (EEAI 10:3)

1. Vyzkumny ustav chmelarsky Ceskoslovenske akademie zemedelskych ved, Zatec.
(Czechoslovakia--Hops)

MATEJA, Frantisek; KOSTELNIK, Josef, MUDr.; JANIUREK, Leopold, MUDr.; VANASEK, Jaroslav

A case of Waldenstrom's macroglobulinemia with massive cryoglobulinemia. Sborn. ved. prac. lek. fak. Karlov. Univ. 7 no.5:749-756 '64.

1. II. interni klinika (prednosta: prof. MUDr. V. Jurkovic, DrSc.); Patologicko-anatomicke oddeleni nemocnice Litomysl, Obvodniho ustavu narodniho zdravi Svitavy; (prednosta: MUDr. J. Kostelnik); Interni oddeleni nemocnice Obvodniho ustavu narodniho zdravi Svitavy (prednosta: MUDr. L. Janiurek).

KOSTELNIK, JOSEF

GOTTRYD, O.; LOUBAL, Lad.; KOSTELNIK, Josef

Cysticercosis of temporal lobe. Rozhl. chir. 37 no.2:110-114 Feb 58.

1. Neurochirurgicke oddeleni I. chirurg. klin. v Brne, prednosta prof. Dr. J. Podlaha Neurologicke oddeleni OUNZ v Mor. Trebove. Patologicko-anatomicky ustav lek. fak. MU v Brne, prednosta prof. Dr. J. Svejda. O. G. Brno, Pekarska 53.

(TEMPORAL LOBE, dis.
cysticercosis, case report (Cz))
(CYSTICERCOSIS, case reports
temporal lobe (Cz))

KOSTELNAK, Miroslav

Cooperation of workers in output measurement of casting machines.
Prace mzda 10 no.9:415-418 S '62.

KOSTELNAK, Miroslav

Some problems of transportation of materials to blast furnaces.
Práce mzda 11 no.7:340-343 Jl '63.

KOSTELNAK, Miroslav

Examining the work organization of a selected group operating agglomeration lines. Prace mzda 11 no.2:87-89 F '63.

1. Vitkovicke zelezarny Klementa Gottwalda, n.p., Ostrava.

KOSTEL'NIKOV, V. A.

D-50 KOSTEL'NIKOV, V. A. Osnovy radiotekhniki, Chast' I (Principles of radio engineering, Part I). Moscow, Gos. izd-vo lit-ry po voprosam svyazi i radio, 1950. 371p. DLC TK6550.K66; OUMF No. 193-B.

An exposition of the general principles of "Radio engineering" (by which the author means high frequency engineering) in the broadest sense as well as the theory of the processes used in radio engineering equipment. The book was approved by the Ministry of Higher Education of the USSR as a manual for higher schools of electrical engineering.

KOSTEL'NIKOVA, A.V.; IVANOVA, E.V.

Study of oxidative phosphorylation in subcellular particles from Azotobacter vinelandii. Dokl. AN SSSR 157 no.3:710-713 Jl '64. (MIRA 17:7)

1. Institut biokhimii imeni A.N. Bakha AN SSSR. Predstavleno akademikom A.I. Oparinym.

SIMKOVIC, J.; HUBKA, M.; KOSTELNY, J.; SCHNORRER, M.

Effect of hypothermia on circulation. Polski tygod. lek. 13 no.31: 1181-1187 4 Aug 58.

1. Z Laboratorium Chirurgi Doswiadczalnej Slowackiej Akademii Nauk w Bratyslawie; kierownik Akademii DAV prof. dr K. Siska. Adres: Poznan, ul. Szkolna 8/12. Doc. dr Jan Mcll.

(HYPOTHERMIA, eff.
on blood circ. in dogs (Pol))
(BLOOD CIRCULATION, physiol.
eff. of hypothermia in dogs (Pol))

VASIL'YEV, Yu.M., kand.tekhn.nauk; KOSTEL'OV, M.P., inzh.

Soil stabilization with tamping-type roller. Avt.dor. 25 no.8:19 Ag '62. (MIRA 16:2)

(Road rollers)

KOSTEL'OV, M.P., inzh.

Lime distributor. Avt. dor. 27 no.4:27 Ap '64. (MIRA 17:9)

KOSTEL'OV, M.P., inzh.

Once more about a screened roller for soil compacting. Avt. dor. 28 no.1:27 Ja '65. (MIRA 18:3)

KOSTELOV, O.L., ROSTOVTSEV, S.T.

Low temperature reduction of iron oxide by gases (hydrogen and carbonyl). Stal' 25 no.3:209-213 Mr '65.

(MIRA 18:4)

KOSTELOV, V.V.; GRINEVICH, I.N.

Accelerating the fuming process with an oxygen-enriched blow.
TSvet. met. 35 no.1:42-46 Ja '62. (MIRA 16:7)
(Nonferrous metals--Metallurgy)
(Oxygen--Industrial applications)

BAZILEVSKIY, V.M.; VERNER, B.F.; KOSTELOV, V.V.

Reprocessing of slags containing zinc, lead, tin and copper. TSvet. met. 29 no.1:82-92 Ja '56. (MLRA 9:6)
(Slag) (Nonferrous metals--Metallurgy)

137-58-6-11981

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 113 (USSR)

AUTHORS: Baymakov, A.Yu., Verner, B.F., Kostelov, V.V.

TITLE An Application of the Fuming Process (Metallotermiya v protsesse f'yumingovaniya)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 9, pp 20-21

ABSTRACT Large quantities of ferrosilicon, a by-product of electrosmelting of Sn concentrates which contains 18-19% of Si, ~30% of Fe, and 3-5% of Sn, have accumulated in various tin-producing plants. In 1956 the Gipromnikel' Institute conducted shop experiments on processing of ferrosilicon by means of fuming of Sn slags containing 1.3-1.5% Sn, 0.5-0.8% Pb, and 2.5-3.5% Zn. After blowing, 0.07-0.08% of Sn remain in the slag, the extraction of Sn attaining 95%. Addition of ferrosilicon is advisable in amounts equivalent to 15% of slag by weight. Experiments dealing with blowing of the ferrosilicon only were also performed.

A.P.

Card 1/1 1. Slags--Processing 2. Iron-silicon alloys--Processing 3. Tin--Separation

SOV/136-58-10-8/27

AUTHORS: Kostelov, V.V. and Morachevskaya, V.S.

TITLE: Zinc Leaching from Fuming Sublimates (Vyshchelachivaniye tsinka iz f'yuming-vozgonov)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 10, pp 39 - 43 (USSR)

ABSTRACT: The first Soviet fuming installation for treating old slags to recover lead, zinc and tin was started at the Podol'sk Tin Works in 1954. The sublimates obtained contained, depending on the slag composition, 2-25% Sn, 7-10% Pb, 30-60% Zn and several other metals. According to preliminary laboratory experiments, the zinc recovery from the sublimate was about 60%. The author describes work carried out at the Gipronikel' Institute in 1956-1958 as a result of which an extraction of 98% Zn into the solution has been obtained from sublimates of a wide range of composition (Table 1). It was shown that the treatment of the sublimates by a two-stage process of neutral and acid leaching fails to give a high extraction because the zinc exists in the form of a chemical compound with tin (often the sulphide) and the leaching is hampered by a coating of iron and possibly, tin hydroxides formed round the sublimate particles in the neutralisation stage.

Card 1/2

Zinc Leaching from Fuming Sublimates SOV/136-58-10-8/27

By using sulphuric-acid solution with a concentration of 120 - 150 g/litre in one or two stages this leaches out 95-98% of the zinc. A materials balance for germanium in the leaching process was drawn up (Table 6), the concentration in neutral and acid-return solutions being 2.3×10^{-5} and $(2.7 - 3.2) \times 10^{-3}$ g/litre, respectively ; practically all the germanium finds its way into the lead-tin cake (Table 6).
There are 6 tables and 4 Soviet references

ASSOCIATION: Gipronikel'

Card 2/2

KOSTELOV, V.V.; VERNER, B.F.; IVANCHENKO, L.P.

Use of the fuming process for the treatment of complex cobalt-containing raw materials. TSvet. met. 33 no.6:37-42 Je '60. (MIRA 14:4)

(Nonferrous metals—Metallurgy) (Cobalt)

KOSTELOV, V.V.; GRINEVICI, I.I. [Grinevich, I.G.]

Intensification of the fuming process by the blast enriched with oxygen. Analele metalurgie 16 no.3:92-98 Jl-S '62.

KOSTELOV, V. V.; GRINEVICH, I. N.

Use of mazut in the fuming process. TSvet. met. 35 no.10:39-42 O '62. (MIRA 15:10)

(Nonferrous metals—Metallurgy)
(Mazut)

OBOZINSKIY, S.M., inzh.; KOSTELYANETS, B.A., inzh.; SHKLOVSKIY, M.Ya., inzh.; PETRISHCHEV, V.B., inzh.

Testing columnar supports resting on low-strength rock. Transp. stroi. 14 no.4:45-47 Ap '64. (MIRA 17:9)

KOSTELYANETS, B.A.

Basis of hydraulic parameters of bridge crossings. Transp. stroi. 15 no.7: 46-47 Jl '65. (MIRA 18:7)

1. Nachal'nik otdela mostov Tomgiprotransa.

L 26528-66 EWP(j)/EWT(m)/T/EWP(v) RM/WW

ACC NR: AP6017408 SOURCE CODE: UR/0097/65/000/006/0021/0023

AUTHOR: Kostelyanets, B. A. (Engineer)

ORG: none

TITLE: Preassembled pile-pier reinforced concrete bridges

SOURCE: Beton i zhelezobeton, no. 6, 1965, 21-23

TOPIC TAGS: reinforced concrete, highway bridge, railway bridge

ABSTRACT: Designs of completely preassembled reinforced concrete bridges of pile-pier type meet present day requirements for the industrialization of railway and auto road structures. The existing typical designs of pile-pier bridges must be reworked in 1965 for the purpose of increasing the spans to 15-18 m, and the height of the embankment to 8-10 m and to unify the basic designs. To develop typical designs for linear construction, it is necessary to provide the possibility of using standard designs for temporary bridges, as well as for building the roadways, operating bridges, and piers. It is necessary to improve the construction of the supporting parts, taking account of the engineering features of the construction of pile-pier bridges. For this purpose, it is well to design the supporting parts in a standard way. To make the pile solid with the grille, organic polymer glues are used. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 13, 11, / SUBM DATE none

Card 1/1 dd

UDC: 624.21.033.6.012.35

GLEZER, V.D.; KOSTELYANETS, N.B.

Changes in the effective size of the receptor field in the frog retina. Biofizika 6 no.6:704-710 '61. (MIRA 15:1)

1. Institut fiziologii imeni I.P.Pavlova AN SSSR, Leningrad.
(RETINA)

KOSTELYANETS, N.B.

Study of receptive off-fields of the retina in frogs by means of moving dark stimuli. Zhur. vys. nerv. deiat. 15 no.3:521-528 My-Je '65. (MIRA 18:6)

1. Laboratoriya zritel'nogo analizatora Instituta fiziologii im. I.P. Pavlova AN SSSR.

L 11861-65 Pb-4 AMD

ACCESSION NR: AP4043846 S/0020/64/157/005/1225/1227

AUTHOR: Kostelyanets, N. B.

B

TITLE: The influence of the velocity of a moving test object on the response characteritics of the ganglion off-cells of the frog retina

SOURCE: AN SSSR. Doklady*, v. 157, no. 5, 1964, 1225-1227

TOPIC TAGS: retina, retinal ganglion cell, retinal motion reaction, retinal receptor, velocity retinal response, response stimulation, response inhibition, inverse velocity response, varying response periodicity

ABSTRACT: Since no specific motion detectors were found in the isolated eye of the frog, the reaction of the functional retinal unit to motion was studied, i. e. the receptor off-field at the level of the third neuron, isolated from the higher links of the system. A microelectrode registered the activity of the ganglion off-cell; the stimulus was provided by horizontal black bands moving over the constantly illuminated retina in a horizontal direction at a rate of 2.5-

Card 1/2

L 14861-65

ACCESSION NR: AP4043846

19 u/millisecond. The boundaries of the field had been determined prior to the experiment. It was found that the higher the velocity the longer the latent period of response, i. e. the number of response pulses. This is in contrast to findings upon conducting similar tests with the axons of the frog tectum (where the latent period decreases with velocity increase). Motion thus seems to stimulate as well as inhibit responses, each with different time characteristics. Conditions for the appearance and development of stimulation from the irritation of a series of receptors may depend upon the specific phase of the inhibition which accompanies stimulation of the preceding series, since changing the velocity will change the time elapsing between the irritation of a preceding and succeeding series of receptors. Thus, no simple summation of stimulations is involved. Orig. art. has: 2 figures.

ASSOCIATION: Institut fiziologii im. I. P. Pavlov Akademii nauk SSSR (Institute of Physiology, Academy of Sciences SSSR)

SUBMITTED: 17Mar64 ENCL: 00
SUB CODE: LS NO REF SOV: 002 OTHER: 004

Card 2/2

KOSTELYANETS, N.B.

Effect of the movement rate of a test object on the characteristics of the response of the ganglionic off-cell of the retina in a frog. Dokl. AN SSSR 157 no.5:1225-1227 Ag '64.

(MIRA 17:9)

1. Institut fiziologii im. I.P. Pavlova AN SSSR. Predstavleno akademikom V.N. Chernigovskim.

ASHKINUZE, V.G., nauchnyy sotrudnik; GIBSH, I.A., nauchnyy sotrudnik; MASLOVA, G.G., nauchnyy sotrudnik; MESHKOV, K.I., nauchnyy sotrudnik; NIKITIN, N.N., nauchnyy sotrudnik; SEMUSHIN, A.D., nauchnyy sotrudnik; FETISOV, A.I., nauchnyy sotrudnik; KOSTELOVSKIY, V.A., red.; TARASOVA, V.V., tekhn.red.

[Teaching mathematics in schools in the 1959/60 school year] O prepodavanii matematiki v shkole v 1959/60 uchebnom godu. Pod red. A.D.Semushina. Moskva, 1959. 135 p. (MIRA 13:5)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov obucheniya. 2. Sektor metodiki prepodavaniya matematiki Instituta metodov obucheniya Akademii pedagogicheskikh nauk RSFSR (for all except Kostelovskiy, Tarasova).
(Mathematics--Study and teaching)

GRUZDEV, I.A.; ZEKKEL', A.S.; KOSTELYANETS, V.S.

Study of transients in a system with limited power during switching-in of hydrogenerators by means of high-speed automatic reclosing of self-synchronization. Trudy LPI no.242:125-130 '65.

(MIRA 18:8)

KOSTELYANETS, P.O.

USSR/Mathematics - Integration

FD-1166

Card 1/1 Pub. 118-7/30

Author : Kostelyanets, P. O., and Reshetnyak, Yu. G.

Title : Determining a completely additive function from its values in half-spaces

Periodical : Usp. mat. nauk, 9, No 3(61), 135-140, Jul-Sep 1954

Abstract : The author solves the problem posed by A. N. Kolmogorov in his article "Mathematical problematics. Problem No 16," Usp. Mat. Nauk, Vol. 5, 1938. Its solution was obtained in first of 1941 by P. O. Kostelyanets, a student at Leningrad University, who later died in the war. A similar solution was later obtained independently by aspirant Yu. G. Reshetnyak. The same problem was again solved independently by A. A. Khachaturov, who published his article in this same journal issue, page 205. The problem is: Consider completely additive nonnegative functions defined for all Borel sets of n-dimensional Euclidean spaces R^n; it is required to show by a direct method that a function F(E) is uniquely determined by the assignment of its values for all half-spaces, i.e. for sets defined by equalities of the type $\sum a_i x_i + b \geq 0$, where $F(R^n) < \infty$. Three references.

Institution :

Submitted : July 14, 1953

KOSTELYANSKIY, V. [Kostelians'kyi, V.], inzh.; KURDYUK, Ye. [Kurdiuk, IE.], inzh.

Electronic dispatcher. Nauka i zhyttia 12 no.1:39-41 Ja '63.
(MIRA 16:3)

(Chemical plants) (Automation)

KOSTELYANSKIY, V.M.

KOSTELYANSKIY, V.M.

Organizing an electric engineering laboratory for the province. Politekh. obuch. no.1:8-9 Ja '58. (MIRA 10:12)

1. Zaveduyushchiy kabinetom fiziki i matematiki Stanislavskogo oblastnogo instituta usovershenstvovaniya vrachey.
(Stanislav Province--Electric engineering--Study and teaching)

AUTHOR: Kostelyanskiy, V.M., (Stanislav) 47-58-2-11/30

TITLE: A Model of an Artificial Earth Satellite (Model' iskusstvennogo sputnika zemli)

PERIODICAL: Fizika v Shkole, 1958, Nr. 2, pp 58 - 59 (USSR)

ABSTRACT: Detailed instructions are given on how to construct a model of an artificial sputnik orbiting a globe. This model serves to show the earth's rotation and explains why the sputniks pass over each point twice in 24 hours and yet is observed only in the evenings and mornings. The model consists of a terrestrial globe on a support connected with brackets, on one of which, the sputnik's suspension rod is fixed. With the aid of a motor and cogs the rotation of the globe is so calculated that the globe makes complete turn in 90 seconds and the sputnik-orbits in 6 seconds. There is 1 figure.

AVAILABLE: Library of Congress

Card 1/1 1. Satellite vehicles-Design 2. Satellite vehicle models-USSR

KOSTELYANSKIY, V.M.

Demonstrating outworn motion-picture films with the 16-MP projector. Fiz. v shkole 18 no.4:72-73 Jl-Ag '58. (MIRA 11:7)

1.Zav.kabinetom fiziki i matematiki Stanislavskogo oblastnogo instituta usovershenstvovaniya uchiteley.
(Motion-picture projection)

22(1) SOV/47-59-3-43/53

AUTHOR: Kostelyanskiy V.M.

TITLE: Two Problems in Physics

PERIODICAL: Fizika v shkole, 1959, Nr 3, p 97 (USSR)

ABSTRACT: The article consists of two physics problems to be solved by students. A miniature circular turbine turns around a prolonged axle which rests on the bearings of a disk installed beneath and parallel to the turbine (figure 1). The disk is supported by an axle which is in line with the turbine axle. The turbine imparts a slight motion to the disk, which, however, turns in the opposite direction. This phenomenon is to be explained by the students. The second problem concerns vector analysis of the gravitational forces acting upon a loaded cart on an inclined plane (figure 2 and 3). The names of the students succeeding in solving the problems will

Card 1/2

L 34005-65 EWT(d)/EED-2/EWP(1) Pc-4/Pq-4/Pg-4/Pk-4 IJP(c) GS/BB
ACCESSION NR: AP5010130 UR/0286/64/000/013/0079/0080

AUTHOR: Kostelyanskiy, V. M.

TITLE: Device for forming and preserving residues of numbers by a factor of 3. Class 42, No. 163806

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1964, 79-80

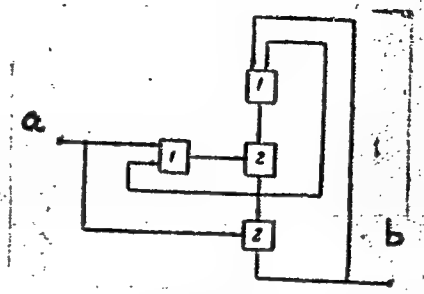
TOPIC TAGS: binary logic, computer component, electronic circuit

Translation: A device for forming and preserving residues of numbers by a value of 3, consisting of "OR" circuits and "inequivalents" circuits. The distinguishing feature is obtaining the sum and difference of residues of numbers presented in a series binary inverse or supplementary code. The output of the first "inequivalent" circuit is connected to the input of each "OR" circuit and to the input of the second "inequivalent" circuit, the output of which is connected to the input of the first "inequivalent" circuit through the "OR" circuit. Orig. art. has: 1 figure.

Card 1/2

L 36206-65
ACCESSION NR: AP5010130

Key: 1 - "OR" circuits;
2 - "inequivalent" circuits;
a - input; b - output



ASSOCIATION: Lisichanskiy filial instituta avtomatiki (Lisichansk. Branch of the Institute of Automation)

SUBMITTED: 04Jan63 ENCL: 00 SUB CODE: DP,

NO REF SOV: 000 OTHER: 000 JPRS

Card 2/2 jo

ZEDGENIDZE, G.A.; GORIZONTOV, P.D.; MOSKALEV, Yu.I.; SVYATUKHIN, G.S.; KOROGODIN, V.I.; KOSTELYANTS, B.L.; STRELIN, G.S.

Brief news. Med. rad. 9 no.2:74-84 D '64.

(MIRA 18:12)

SHKLOVSKIY, M.Ya., inzh.; PETRISHCHEV, V.B., inzh.; KOSTELYNAETS, B.A., inzh.; OBOZINSKIY, S.M., inzh.

Construction of bridge footings made of reinforced concrete shells in deposits of gravel and boulders. Transp. stroi. 12 no.11:23-25 N '62. (MIRA 15:12)

1. Mostostroy No.2 (for Shklovskiy). 2. Mostopoyezd No.465 Mostostroya No.2 (for Petrishchev). 3. Tomgiprotrans (for Kostelyanets, Obozinskiy).
(Bridges—Foundations and piers) (Precast concrete construction)

KOSTENCKA-AKSLER, A.

Early results of ambulatory treatment of pulmonary tuberculosis with streptomycin. Gruzlica 20 no. 6:821-829 Nov-Dec 1952. (CLML 24:2)

1. Of the Tuberculosis Consultation Center of the Institute of Tuberculosis (Director--Prof. J. Misiewicz, M.D.), Warsaw.

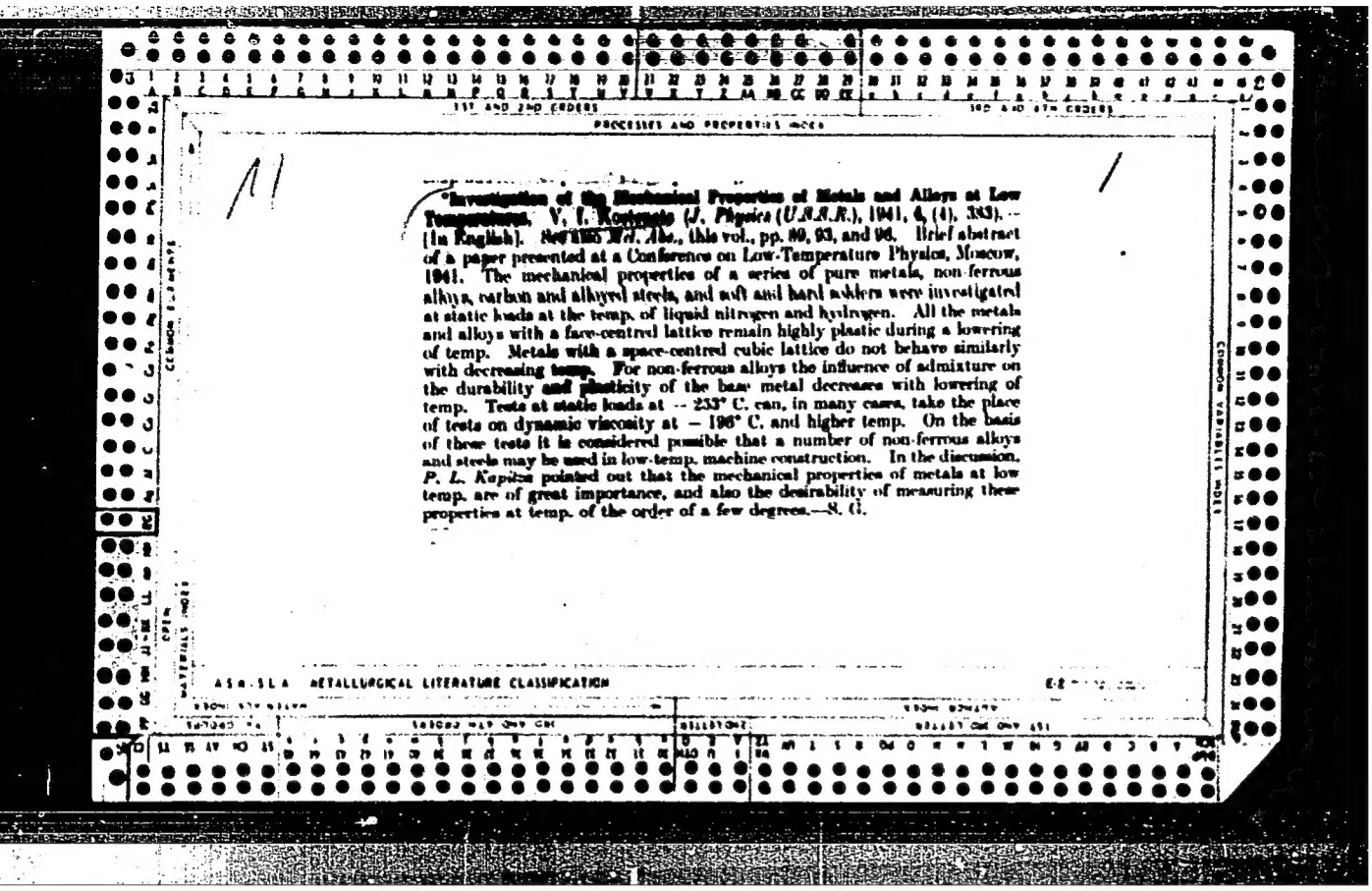
UNGUREANU, Nicolae; KOSTENCZYK, M.

High evaluation of raw materials in the light of industry.
Probleme econ 17 no. 6:159-160 Je '64.

1. Director, "Dacia" Enterprise, Bucharest (for Ungureanu).
2. Director, the "Textila Grivita" Enterprise, Bucharest (for Kostenczyk).

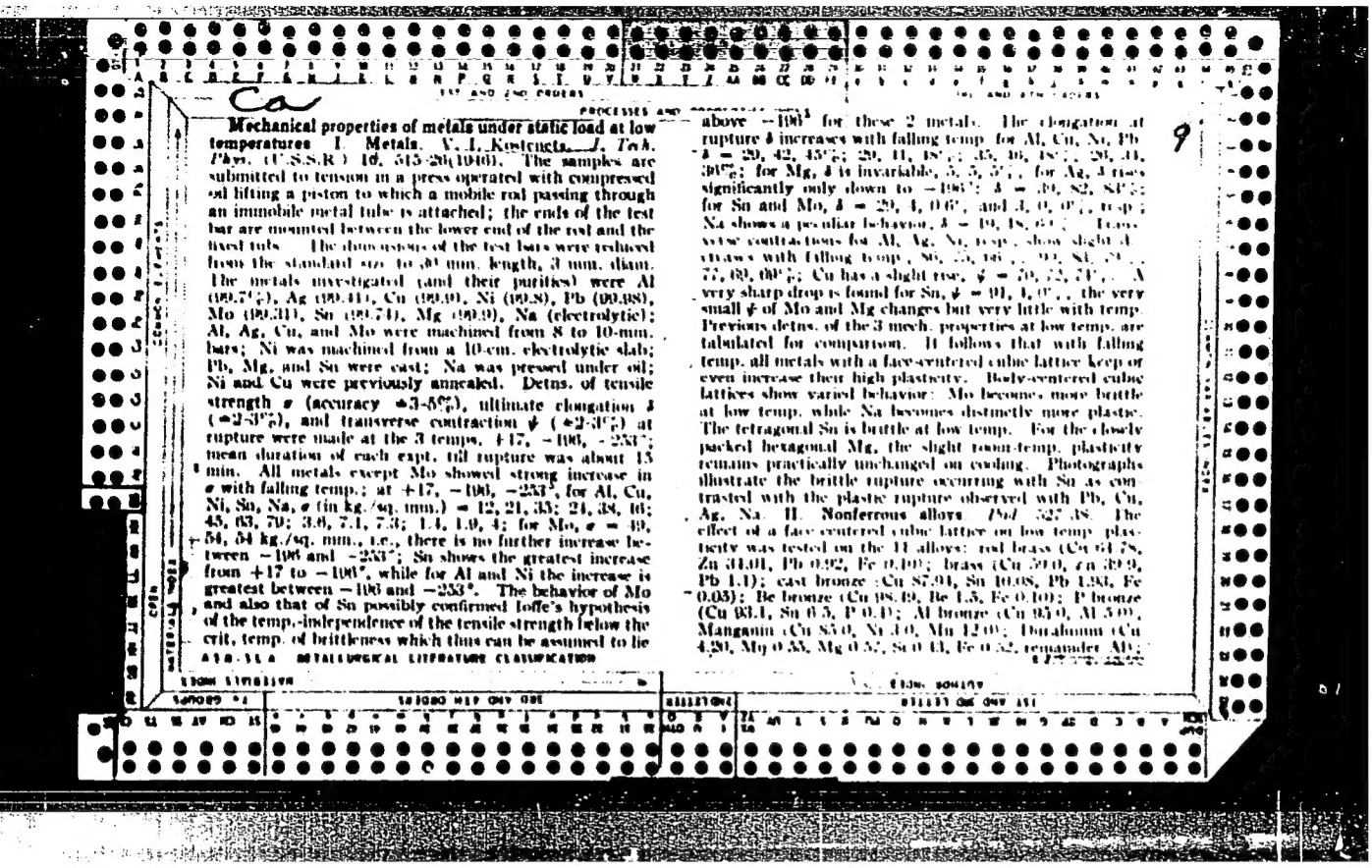
KOSTENETSKIY, Kirill Pavlovich; BERLYAND, S.S., red.; YUSFIN, Yu.S., red.izd-va; MIKHAYLOVA, V.V., tekhn. red.

[Development of transportation in metallurgy; problems in the general plan of and transportation in iron and steel plants] Razvitie transporta v metallurgii; voprosy general'nogo plana i transporta metallurgicheskikh zavodov. Moskva, Metallurgizdat, 1963. 332 p. (MIRA 17:3)



"Investigation of the Mechanical Properties of Metals and Alloys at Low Temperatures. V. I. Kostenko (*J. Physics* (*U.S.S.R.*), 1941, 4, (4), 383). — [In English]. See *Met. Abs.*, this vol., pp. 80, 93, and 96. Brief abstract of a paper presented at a Conference on Low-Temperature Physics, Moscow, 1941. The mechanical properties of a series of pure metals, non-ferrous alloys, carbon and alloyed steels, and soft and hard solders were investigated at static loads at the temp. of liquid nitrogen and hydrogen. All the metals and alloys with a face-centred lattice remain highly plastic during a lowering of temp. Metals with a space-centred cubic lattice do not behave similarly with decreasing temp. For non-ferrous alloys the influence of admixture on the durability and plasticity of the base metal decreases with lowering of temp. Tests at static loads at — 253° C. can, in many cases, take the place of tests on dynamic viscosity at — 196° C. and higher temp. On the basis of these tests it is considered possible that a number of non-ferrous alloys and steels may be used in low-temp. machine construction. In the discussion, *P. L. Kapitza* pointed out that the mechanical properties of metals at low temp. are of great importance, and also the desirability of measuring these properties at temp. of the order of a few degrees.—S. G.

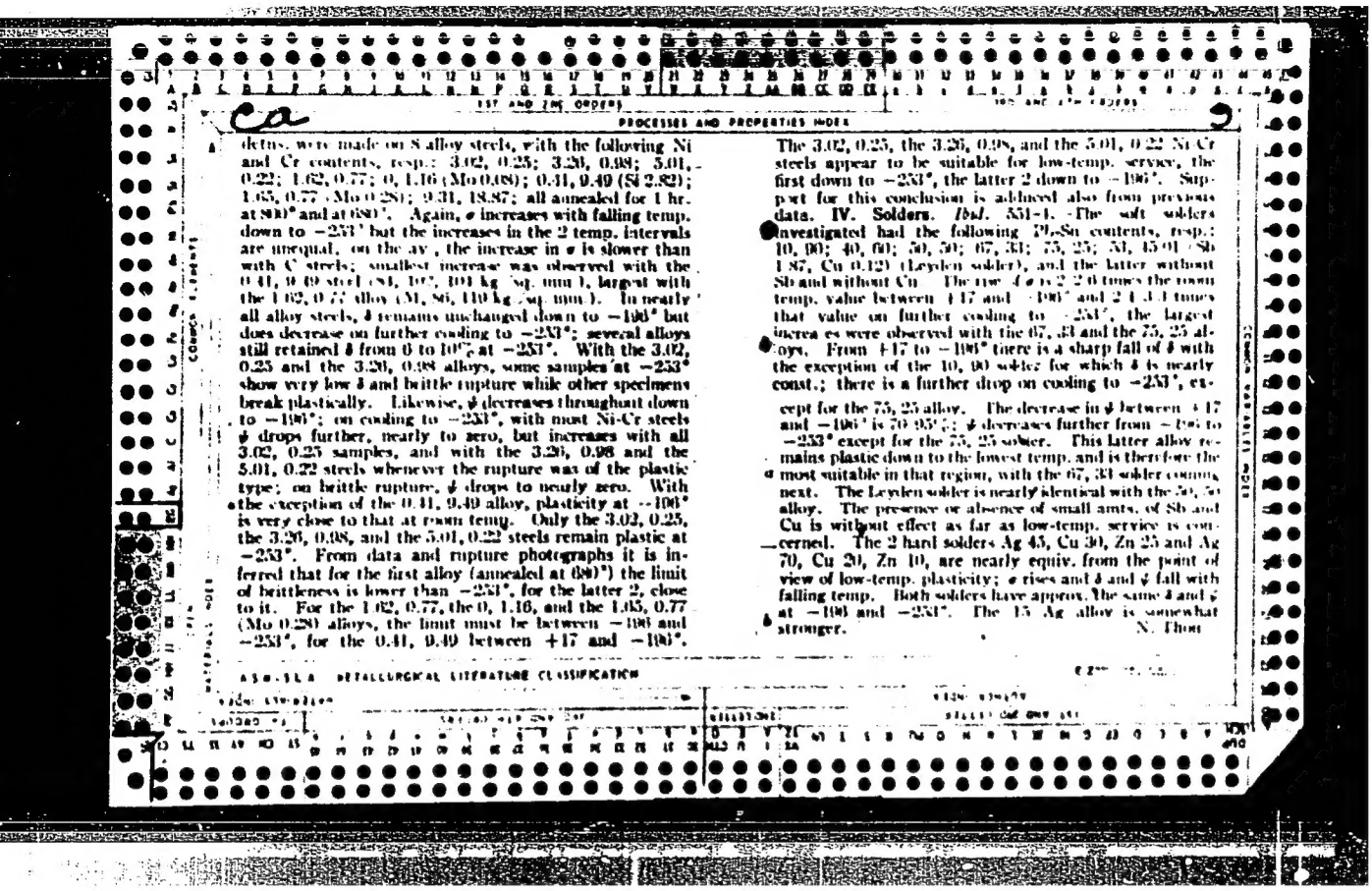
A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION



Ca

Mechanical properties of metals under static load at low temperatures I. **Metals.** V. I. Kostenets. *J. Tech. Phys.* (U.S.S.R.) 10, 515-20(1940). The samples are submitted to tension in a press operated with compressed oil lifting a piston to which a mobile rod passing through an immobile metal tube is attached; the ends of the test bar are mounted between the lower end of the rod and the fixed tube. The dimensions of the test bars were reduced from the standard size to 60 mm. length, 3 mm. diam. The metals investigated (and their purities) were Al (99.7%), Ag (99.41), Cu (99.9), Ni (99.8), Pb (99.88), Mo (99.31), Sn (99.74), Mg (99.9), Na (electrolytic); Al, Ag, Cu, and Mo were machined from 8 to 10-mm. bars; Ni was machined from a 10-cm. electrolytic slab; Pb, Mg, and Sn were cast; Na was pressed under oil; Ni and Cu were previously annealed. Detns. of tensile strength σ (accuracy ±3-5%), ultimate elongation δ (±2-3%), and transverse contraction ψ (±2-3%) at rupture were made at the 3 temps, +17, −100, −253°; mean duration of each expt. till rupture was about 15 min. All metals except Mo showed strong increase in σ with falling temp.; at +17, −100, −253°, for Al, Cu, Ni, Sn, Na, σ (in kg./sq. mm.) = 12, 21, 35; 24, 38, 46; 45, 63, 79; 3.6, 7.1, 7.3; 1.4, 1.9, 4; for Mo, σ = 49, 54, 54 kg./sq. mm., i.e., there is no further increase between −100 and −253°; Sn shows the greatest increase from +17 to −100°, while for Al and Ni the increase is greatest between −100 and −253°. The behavior of Mo and also that of Sn possibly confirmed Ioffe's hypothesis of the temp.-independence of the tensile strength below the crit. temp. of brittleness which thus can be assumed to lie above −100° for these 2 metals. The elongation at rupture δ increases with falling temp. for Al, Cu, Ni, Pb: δ = 20, 42, 45%; 20, 41, 48%; 35, 46, 48%; 28, 41, 30%; for Mg, δ is invariable, 5, 5, 5%; for Ag, δ rises significantly only down to −100°: δ = 30, 82, 84%; for Sn and Mo, δ = 20, 4, 0.6%, and 3, 0, 0%, resp.; Na shows a peculiar behavior, δ = 10, 18, 6%. Transverse contractions for Al, Ag, Ni, resp. show slight rises with falling temp., 80, 85, 86%; 92, 94, 94%; 77, 69, 60%; Cu has a slight rise, ψ = 70, 75, 74%. A very sharp drop is found for Sn, ψ = 91, 4, 0%, the very small ψ of Mo and Mg changes but very little with temp. Previous detns. of the 3 mech. properties at low temp. are tabulated for comparison. It follows that with falling temp. all metals with a face-centered cube lattice keep or even increase their high plasticity. Body-centered cube lattices show varied behavior: Mo becomes more brittle at low temp. while Na becomes distinctly more plastic. The tetragonal Sn is brittle at low temp. For the closely packed hexagonal Mg, the slight room-temp. plasticity remains practically unchanged on cooling. Photographs illustrate the brittle rupture occurring with Sn as contrasted with the plastic rupture observed with Pb, Cu, Ag, Na. II. **Nonferrous alloys.** *Ibid* 527-38. The effect of a face-centered cube lattice on low temp. plasticity was tested on the 11 alloys: rod brass (Cu 61.78, Zn 34.01, Pb 0.92, Fe 0.10); brass (Cu 59.0, Zn 39.9, Pb 1.1); cast bronze (Cu 87.91, Sn 10.08, Pb 1.93, Fe 0.03); Be bronze (Cu 98.49, Be 1.5, Fe 0.10); P bronze (Cu 93.1, Sn 6.5, P 0.4); Al bronze (Cu 93.0, Al 5.09, Manganin (Cu 85.0, Ni 3.0, Mn 12.0); Duralumin (Cu 4.20, Mg 0.55, Mg 0.57, Si 0.43, Fe 0.52, remainder Al);

Lautal (Cu 4.30, Mn 0.80, Si 0.01, Fe 0.51, remainder Al); Silumin (Si 0.87, Al 99.13); Electron (Mg 90.00, Al 3.5, Mn 0.21). In all cases, σ increases with falling temp., examples, tol brass, and cast bronze, σ = 42, 50, 61 and 31, 38, 42 kg./sq. mm. The rate of increase is unequal for different alloys; it is generally lower than for the pure metals, it is higher for Al-base alloys than for Cu-base alloys. By comparison with the pure metals, it is concluded that with falling temp. the effect of addns. to the base metal diminishes; this is particularly marked with Al-base alloys. The elongation δ increases with falling temp. for all alloys except cast bronze, Silumin, and Electron; the former shows between +17 and −253° a 3.3-fold decrease of δ, for the latter two, there is practically no change. As between −196 and −253°, only Be bronze and Lautal show an increase in δ. Manganin shows a max. at −196° but this observation needs further confirmation. Same as for σ, the effect of addns. to the base metal on δ diminishes with falling temp., except for Be bronze, P bronze, and Lautal. With regard to ψ, most alloys show a slight (5–10%) decrease, only cast bronze has a distinct 2-fold increase; no change is found with brass and Al bronze; with Lautal ψ drops from +17 to −196° and rises again at −253°. For Electron and Silumin ψ is very small at all temp. Again, the effect of addns. to a base metal diminishes the lower the temp. It follows that nearly all face-centered cubic alloys remain plastic down to liquid-H temp.; however, for cast bronze δ and ψ are still fairly large (12 and 11%) at −253°; Silumin and Electron are brittle at all temps. Strain-stress diagrams at the 3 temps., constructed by minute-to-minute readings of load and elongation, show a distinct yield point Y only for Manganin and Lautal. If by convention Y is identified with the load corresponding to an elongation of 0.2%, it follows that Y increases throughout with falling temp. By their mech. properties, P bronze and Be bronze are most suitable for low-temp. applications. III. **Carbon and alloy steels.** V. I. Kostenets and A. M. Ivanchenko. *Ibid.* 539–50. Eight C steels with 0.10 to 0.50% C were partly annealed for 1 hr. at 800° and cooled in the furnace, partly annealed under the same conditions at temp. corresponding to the γ transition curve of the phase diagram, between 800 and 880°. In all cases, σ rises with falling temp., about 1.5–2.3 times between +17 and −196°, and 2–2.7 times (with respect to the room temp. value) between −196 and −253°, the differences in annealing have practically no effect. At each of the 3 temps. σ increases distinctly with increasing C content, the curves are very nearly parallel, σ = , with 0.10, 0.30, 0.50% C, at −0.196, σ = 80, 100, 118 kg./sq. mm. Also in all cases, δ decreases with falling temp., even though unequally so, however, at −253°, δ becomes nearly zero, no particular effect of the thermal treatment was noticed. Transverse contraction ψ falls more sharply than δ, down to 0.5% at −253°, but certain steels (0.2% C) keep a fairly high ψ at −196° (35–40%) and show some differences according to annealing conditions. Yield points Y can be detd. quite sharply (except at −253°) from sudden change of elongation while the oil-pressure manometer remains const. or even drops. The values of Y increase from +17 to −196° and also with rising C content. At −196°, plasticity first rises, then falls with C content; the max. lies at about 0.25% C, δ = 20%, ψ = 31%. All C steels are brittle at −253°. The same



PROCESSES AND PROPERTIES INDEX

deltas, were made on 8 alloy steels, with the following Ni and Cr contents, resp.: 3.02, 0.25; 3.20, 0.98; 5.01, 0.22; 1.62, 0.77; 0, 1.16 (Mo 0.08); 0.41, 0.49 (Si 2.82); 1.05, 0.77 (Mo 0.28); 9.31, 18.87; all annealed for 1 hr. at 800° and at 680°. Again, σ increases with falling temp. down to −253° but the increases in the 2 temp. intervals are unequal, on the av., the increase in σ is slower than with C steels; smallest increase was observed with the 0.41, 0.49 steel (81, 107, 101 kg./sq. mm.), largest with the 1.62, 0.77 alloy (81, 86, 110 kg./sq. mm.). In nearly all alloy steels, δ remains unchanged down to −100° but does decrease on further cooling to −253°; several alloys still retained δ from 0 to 10% at −253°. With the 3.02, 0.25 and the 3.20, 0.98 alloys, some samples at −253° show very low δ and brittle rupture while other specimens break plastically. Likewise, ψ decreases throughout down to −100°; on cooling to −253°, with most Ni-Cr steels ψ drops further, nearly to zero, but increases with all 3.02, 0.25 samples, and with the 3.20, 0.98 and the 5.01, 0.22 steels whenever the rupture was of the plastic type; on brittle rupture, ψ drops to nearly zero. With the exception of the 0.41, 0.49 alloy, plasticity at −100° is very close to that at room temp. Only the 3.02, 0.25, the 3.20, 0.98, and the 5.01, 0.22 steels remain plastic at −253°. From data and rupture photographs it is inferred that for the first alloy (annealed at 680°) the limit of brittleness is lower than −253°, for the latter 2, close to it. For the 1.62, 0.77, the 0, 1.16, and the 1.05, 0.77 (Mo 0.28) alloys, the limit must be between −100 and −253°, for the 0.41, 0.49 between +17 and −100°.

The 3.02, 0.25, the 3.20, 0.98, and the 5.01, 0.22 Ni Cr steels appear to be suitable for low-temp. service, the first down to −253°, the latter 2 down to −196°. Support for this conclusion is adduced also from previous data. **IV. Solders.** *Ibid.* 551–4. The soft solders investigated had the following Pb–Sn contents, resp.: 10, 90; 40, 60; 50, 50; 67, 33; 75, 25; 33, 45 (+Sb 1.87, Cu 0.12) (Leyden solder), and the latter without Sb and without Cu. The raw σ is 2.2–6 times the room temp. value between +17 and −100° and 2.4–4.1 times that value on further cooling to −253°, the largest increases were observed with the 67, 33 and the 75, 25 alloys. From +17 to −100° there is a sharp fall of δ with the exception of the 10, 90 solder for which δ is nearly const.; there is a further drop on cooling to −253°, except for the 75, 25 alloy. The decrease in ψ between +17 and −196° is 70–95%; ψ decreases further from −196° to −253° except for the 75, 25 solder. This latter alloy remains plastic down to the lowest temp. and is therefore the most suitable in that region, with the 67, 33 solder coming next. The Leyden solder is nearly identical with the 50, 50 alloy. The presence or absence of small amts. of Sb and Cu is without effect as far as low-temp. service is concerned. The 2 hard solders Ag 45, Cu 30, Zn 25 and Ag 70, Cu 20, Zn 10, are nearly equiv. from the point of view of low-temp. plasticity; σ rises and δ and ψ fall with falling temp. Both solders have approx. the same δ and ψ at −100 and −253°. The 15 Ag alloy is somewhat stronger. N. Thon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION